Medical Errors: Physician and Institutional Responsibilities

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In "To Err is Human: Building a Safer Health System," the Institute of Medicine (IOM) demonstrates that technological advances in the hospital setting do not come without consequences. In this report, the IOM revealed that of the 98,000 hospital deaths that can be attributed to medical errors each year, 90% are the result of failed systems and procedures.[1] Although prevention of these "systems errors" is essential to improving patient safety, institutions and individual physicians continue to struggle in their efforts to foster and participate in cultures of error prevention. The following case vignette illustrates the challenges of error prevention, and highlights the responsibilities that physicians and institutions must fulfill if the goal of building a safer health system is to be achieved.

Vignette

A 54-year-old man receiving hospice care for advanced metastatic lung cancer presents to emergency care with severe pain that can no longer be controlled with his usual dose of oral morphine. He is admitted to the hospital for pain control and stabilization of symptoms. On admission, he is in pain and distressed, but is awake, alert, and coherent. His vital signs are stable, other than tachycardia caused by pain. Orders are written for intravenous morphine via a patient controlled analgesia (PCA) pump.

Before his hospital admission, the patient delegated power of attorney for health care decisions to his wife. He told her he did not want futile life saving interventions to be performed on him.

The PCA pump used to administer the patient's morphine was new, and had a different way of displaying drug concentration and a different alarm trigger than the previous system. Not used to the concentration display, the bedside nurse unintentionally programs the pump to deliver a dose of morphine higher than intended. Furthermore, although the prior system emitted a sound when the pump failed to deliver medication (usually caused by air or kinks in the lines), the new system emits a sound when the drug has been delivered. The nurse interprets the sound of the new pump as a failure of administration and repeats the dose. As a result, the patient receives a significantly higher dose of morphine and rapidly develops respiratory suppression that, if not treated, would lead to his death.

Physician Responsibilities

Proposed Action #1: Disclose Adverse Event to Patient and Family

The team treating this patient should inform his wife that his respiratory suppression was because of a reversible narcotic overdose, which can be treated aggressively in the intensive care unit (ICU). The treating physician should also disclose that the patient's condition was the result of an adverse event.

It is ethically incumbent on the health care providers involved in an unexpected adverse event that has caused harm to a patient to disclose the event to the patient and, where appropriate, to the patient's family. Honesty is an essential component of the relationship between health care providers and their patients. Disclosure upholds the integrity of this relationship, even though the course of treatment has not proceeded as everyone involved would have hoped.

Furthermore, withholding vital information about the etiology of a patient's medical condition interferes with his or her ability to make informed decisions about future treatment. In this case, if the patient's wife is not informed that his respiratory suppression is the result of accidental overmedication, she might believe his symptoms are indicative of a decline in his overall health severe enough to make intensive care futile, counter to his express wishes. (Surrogate decision makers must make decisions on the basis of what the patient would want if he or she was able to make the decision, not on the basis of what the surrogate perceives to be in the patient's best interest.) However, if she is informed that the patient's respiratory suppression is drug induced and reversible, she might opt for aggressive ICU treatment.

To provide continuity, the treating physician should take the lead in disclosing to the patient's family on the institution's behalf. The physician should assure the family that the institution will diligently investigate the cause of the adverse event, and will be forthcoming with additional information.

Proposed Action #2: Report to Institutional Authorities

The team should report the adverse event to appropriate institutional authorities.

Physicians involved in adverse events must also report to the appropriate authorities within their institutions. Because reporting requirements can vary between institutions, physicians should consult their institutions' policies directly for more information.

Prompt reporting allows hospitals to take immediate steps to ensure that the cost of any additional treatment is not passed along to the patient or the patient's family. In this case, the hospital should cover the costs of the patient's ICU care and any additional coinsurance.

Institutional Responsibilities

For hospitals and other institutions, the introduction of technical change, although necessary and desirable, carries with it a responsibility to guard against potential risks. Institutions are obligated to investigate adverse events as they transpire, and work to prevent recurrences.

Proposed Action #1: Investigate Cause of Errors

The hospital should report this occurrence as a sentinel event and conduct a root cause analysis.

The Joint Commission on Accreditation of Healthcare Organizations' (JCAHO) Sentinel Event Policy requires hospitals and other health care institutions to identify and respond appropriately to any "unexpected occurrence involving death or serious physical or psychological injury, or risk thereof" that signals the need for immediate investigation and response. According to JCAHO's policy, an appropriate response must include a timely, thorough, root cause analysis and the development and implementation of an action plan designed to reduce risk.

Root cause analysis is a retrospective approach to error analysis in which underlying causal factors are identified. This inquiry is intended to focus on changes that could be made to systems and processes that would prevent the error from occurring again in the future, and not on individual performance.[2] On the basis of root cause analysis, hospitals and other institutions should be able to develop an action plan that identifies necessary changes and assigns responsibility for making them.[3]

In this case, a root cause analysis could reveal that there have been several "near misses" since the pumps were introduced. An appropriate action plan would include a full retraining effort and a recommendation that new technologies be formally evaluated for factors that could give rise to systems errors.

Proposed Action #2: Disclose Error to Patient and Apologize Where Appropriate

Because the root cause analysis revealed a systems error, the institution and treating physician(s) should disclose the error to the patient. Ethically, it is important to apologize to the patient. This is underscored by the positive experiences of institutions that have implemented robust disclosure policies. However, institutional policies and legal concerns may discourage physicians and institutions from apologizing to patients who have been harmed by medical errors.

Though disclosure of harmful errors is considered an ethical duty by the American Medical Association (AMA)[4] and is required by JCAHO,[5] research shows that even physicians with the best of intentions balk at disclosing harmful medical errors.[6,7] In addition, conventional wisdom has long discouraged physicians and institutions from apologizing for errors, which could be perceived an admission of fault and bolster patients' malpractice claims. However, recent articles demonstrate that what patients who experience medical errors want most is information about the error, assurance that it will not occur again, and an apology from the institution or physician involved.[8,9] Those most likely to file suit do so because they perceive that the physician or other institutional representative was not honest about the incident or forthcoming with information.[10]

Furthermore, disclosing of a medical error without apologizing for any harm the error caused seems disingenuous. Patients may interpret this omission to mean that the physician or institution does not regret the error, which can foster feelings of dissatisfaction.[10]

In the case of a harmful error, the apology should come from the person or institution that bears primary responsibility for the error. For systems errors, an apology from an administrator is warranted. It is also recommended that the patient's treating physician be present to provide continuity for the patient.

Physicians and others should keep the following best practices in mind when disclosing medical errors and apologizing to patients[11]:

- Relay information as soon as possible
- Recognize that this may be a highly emotional time; the meeting space should be private and quiet
- Use language and body language that is empathetic, open, respectful, and sincere; avoid medical jargon
- Ask for the patient and family's understanding of what happened
- Express remorse for any harm to the patient
- Offer reparations where feasible.

There is no question that open communication about medical errors would be easier to foster, and patient safety easier to ensure, if the legal system encouraged communication between physicians and patients. Physicians' fears of litigation and other punitive actions often deter them from disclosing medical errors. Nondisclosure counteracts efforts to promote patient safety, breeds distrust, and provokes litigation. Legislation could bring an end to this unproductive cycle. The National Medical Error Disclosure Act (MEDiC) of 2005 proposed allowing health care providers involved in medical errors to disclose to patients confidentially and enter into negotiations for fair compensation. If this bill were enacted, any apology offered by a health care provider during negotiations would not be considered an admission of guilt in legal proceedings. In addition, several states have recently adopted "apology laws" that make apologies inadmissible in malpractice cases on the basis of medical errors.[10]

Even without legislation, some institutions have chosen to adopt robust disclosure policies and reaped significant

benefits, including improved patient safety records and decreased liability costs.[12] For example, in 2002 the University of Michigan Health System adopted a program in which patients who experience harmful medical errors are "compensated quickly and fairly, meritless law suits are aggressively defended, and all adverse events are studied for purposes of quality improvement."[12] As a result, the health system experienced a decline in the number, duration, and cost of law suits, and was able to invest its savings in quality improvement initiatives like the automation of its patient-safety reporting system.[12] Similar success was reported by the Veterans' Affairs (VA) Hospital in Lexington, Kentucky, which also adopted a robust disclosure policy.

Although there is a movement in favor of physician apologies, legal opinions can differ. How apologies are received may depend on the policies at a physician's institution and in his or her home state. When in doubt, physicians should consult legal counsel.

Proposed Action #3: Fostering a Culture of Error Prevention

The hospital should adopt policies that promote error prevention.

To preserve patient safety hospitals must focus on overall quality improvement, not individual blame and punishment. Some institutions have overcome the challenges involved in meeting this goal, and implemented creative plans that increase communication about and learning from medical errors.

To prevent systems errors, many institutions are taking lessons from the aviation industry. Aviation, like medicine, involves highly trained professionals working with complex technological systems. As a result, both fields are at risk for errors that occur at the interface between the technological system and the user. Aviation-inspired practices adopted by hospitals, such as pre- and postoperative briefings, simulator training, checklists, annual competency reviews, and incident reporting, help health care professionals identify and effectively communicate problems, support and listen to team members, resolve conflicts, develop contingency plans, and use all available resources to make decisions. Research shows that adopting these practices can lead to fewer malpractice suits and postsurgical infections, faster patient recovery, and greater employee satisfaction.[13]

Conclusion

Individual physicians and institutions have significant responsibilities when adverse events occur. Physicians should disclose adverse events to their patients and report promptly to institutions. Institutions must make sure that patients harmed by adverse events do not face additional financial burdens; conduct a root cause analysis; and develop an action plan if necessary. If an actual error transpired, the appropriate physician or institutional representative should apologize to the patient. Institutions should also adopt policies that encourage smooth transitions to new technologies, and foster communication as the key to improving patient safety.

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